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CAPILLARY PERMEABILITY AND DERMATITIS AFTER ARSENOBENZOL INJECTION

A CLINICAL NOTE

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Case 1.—*English seaman, æt. 20.*—Bluish-white healed over, smooth, non-indurated, recent scar on glans penis—level with surrounding surface. Chancre first noticed ten weeks previously, and fourteen days after coitus.

Suppurating left inguinal bubo. Right inguinal nodes palpable.

No other glandular enlargement detected. Mouth, fauces, normal. No rash.

Complement fixation test, blood (Method No. 1, M.R.C.) completely negative.

Given 0.3 gram stabilarsan as provocative injection. No flushing noticed after injection; seven days later C.F.T., blood completely negative; local treatment of bubo continued.

On evening of twentieth day after injection, bubo was found completely healed; patient complained of nothing; and nothing abnormal detected.

On morning of twenty-first day after injection, patient found with pronounced blanched swelling of eyelids, accompanied by flushed, thickened appearance and feel of skin of forehead and rest of face and neck. All skin elsewhere, mouth and fauces, normal. Urine and T° normal. All this time he had been in hospital, on the ordinary hospital diet, and had received no drugs.

Diagnosis.—Commencing Arsenical Dermatitis.

Treatment.—Bed, and 0.9 gram sod. thiosulph. (Thiostab) injected intravenously (11 a.m.).

The patient had shown no signs of seborrhœa or acne; his skin was pink and smooth. Wind and sea had allowed him, in fact, still to "keep that school-girl complexion."

On the next day the blanched œdema around eyelids

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was more extensive, its whiteness now in striking contrast to the skin of the rest of face and neck, which was very red, thick to feel, and "irritating." Scrotum and inner surface of thighs red, thickened and carrying many pin-head vesicles. T°, 102.4° F. Urine normal.

0.9 gram Thiostab I.V. and local applications to skin given.

Briefly—from then on the patient received *daily* 0.9 gram Thiostab I.V., besides other local treatment to skin, and daily grew worse. Vesicular pustular dermatitis spread all over the body, with moist cracking exfoliation of skin. He became almost completely clothed in pus.

Broncho-pneumonia developed; swinging septic T°; frequent low delirium; muffling of heart sounds and missed beats.

By the end of the seventh week from onset of oedema of eyelids, vigorous convalescence was established, with branny desquamation of skin and steady falling out of hair. Thiostab 0.9 gram daily now stopped.

This case, in the writer's experience of twenty-five other cases of Arsenical Dermatitis, is unusual for—

(1) The very extensive transudation from capillaries in and around eyelids.

(2) The onset, twenty-one days after a single rather small dose of stabilarsan.

(3) The severity of the illness after such single small dose.

(4) The apparent failure of sodium thiosulphate, though given early enough, to affect the course of the illness.

It is, perhaps, permissible to argue that sodium thiosulphate—

(a) should have been given more often, or in bigger doses, or

(b) less often or in smaller doses,

and, less plausibly, that without some sodium thiosulphate the patient would have died.

Case 2.—English, *æt.* 54, a bitten grey man; with angry red acne-rosacea-like condition of central forehead, nose and cheek bones; harsh red-brown fish-skinned neck and arms; small girth and less than ordinary stature. Confessedly alcoholic when time, opportunity, and cash served; a sly, cheerful Bardolph gone to sea.

Fissured glazed tongue, on each side of which, mid-way, was gummatous ulceration. The sparse blackened teeth

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had no jagged edges. Chancre and rash "over 30 years ago."

Clinically, liver normal; urine no alb., no sugar; artery at wrist thick but not hard, regular full pulse. Heart sounds normal and no enlargement detected. Achilles tendon, patellar and pupillary reflexes normal; scarred penis; puckered inguinal scars. (C.F.T., blood (No. 1, M.R.C.) positive + +.)

0.3 gram Neokharsivan given intravenously; followed promptly by vivid scarlet flushing all over. He complained of feeling hot, and then that face and neck were being "stung by mosquitoes." In two or three minutes there appeared on sides of neck, and on face beyond the rosacea area, *and nowhere else*, discrete white lumps, seven in number, steadily increasing in size up to nearly $\frac{1}{4}$ in. diameter, with summit $\frac{1}{8}$ in. above the skin. He touched these white lumps—"there are the stings." In ten minutes the flushing had gone, and one hour later the lumps were barely discernible. Next day nothing of all this could be detected; there had been, so far, no ill after-effects. That day his ship sailed with him.

In Case 1 the capillary transudation occurred three weeks, and in Case 2 within a few minutes, after the arsenobenzol injection. In both it was confined to a region of the body where it could do no harm.

One recalls that coma after arsenobenzol injections may come on within a few minutes, hours, or even days. Some of them have been saved, apparently, by lumbar puncture and drainage of cerebro-spinal fluid. One suggests that in some of them the coma was caused by trans-cerebral-capillary ooze rather than by multiple minute cerebral hæmorrhages.